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1936



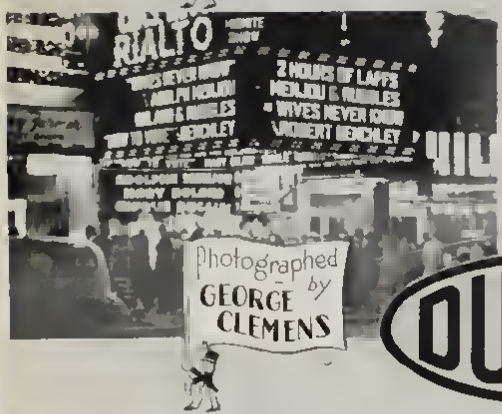
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● Len Roos, A S C, has returned to Hollywood after an extensive trip throughout Europe shooting travel pictures in color for one of our Major studios Roos will give interesting experiences he encountered on this trip.

● What are the Studios doing about color still photography? Magazines and newspapers are demanding colored stills We are looking into this activity and hope to report to you in our next issue



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Cinematographer

December
1936

Patent Troubles Seem To Be Brewing

an
Editorial

FORTUNATELY THE MOTION picture business has been reasonably clear of patent litigation. During the early days of the industry when it was controlled by the Motion Picture Patents Company there was considerable side stepping until the courts stepped in and threw many of the essential rights open to all comers.

Recently the major producers exchanged patent privileges and pooled the rights they controlled on background projection. A very commendable move.

Now according to minor rumblings, there seems to be an agitation to foment litigation on optical printing patents. What the claims are based on we do not know. Where right stands we do not know.

We are more interested in the ethical aspect of the whole patent situation. We are sure the producers realize it is cheaper to buy before than pay through the courts afterwards. Fortunately for the industry we have not had many unscrupulous producers or mechanics. Now and then there have been claims of lifting design and claiming the credit with the higher-ups. Outside mechanics have submitted ideas and the insiders have appropriated them as their own brain child. There are claimed to be cases where a few have not had the courage to tell the producer that the article is infringing because they were the ones who encouraged the making of the item in the first place.

The large electric companies learned their lesson a good many years ago to handle patentable items carefully. Recently an inventor wanted to submit an item to one of these companies. They insisted that he submit his patent papers before they would even look at it.

Sometimes a designer may inadvertently imitate something he has seen, forgetting where and when he saw it and believing he imagined the thing.

More care exercised by the designers, more research will mean less trouble. Infringements on a camera were recently settled, according to report, by that studio buying several of the cameras upon which they were infringing.

Technical

WHILE THE TWELVE months just closing brought forth no technical development of a revolutionary nature they have brought much that is of more lasting value— detail improvements in materials, equipment and methods which the industry can assimilate in its stride It is especially significant that during 1936 virtually every studio began in some fashion the long-deferred task of replacing obsolescent equipment, much of which had been in service since the coming of sound nearly a decade ago Heretofore, while more modern equipment was available, the studios have seemed either unable or unwilling to invest in it This year they bought—in lots of a dozen cameras here, two or three hundred lamps there, and a half-score dollies elsewhere It is an extremely healthy sign

Methods.

Throughout the industry, production-schedules have been increased More pictures are being made, and more money spent on production, than in any year since the start of the depression In many quarters, too, there appears a definite reaction against the ultra-cheap "Class B" production As regards specials, budgets have reached new all-time highs, and more big, expensive pictures have been made than have been in many years

The much-heralded color "boom" did not materialize, but in its place came a more fundamentally sound development the production of nearly a score of color features, in several different processes, by both major and independent producers This permitted a more intelligent exploration of the problems and possibilities of color than could be possible in a wild, industry-wide scramble for "something in color"

In all phases of the business—production, distribution and exhibition—there have been fruitful moves toward standardizing details of basic equipment and practices A more understanding cooperation between studios as to technical things is also evident

Influence of Foreign Elements.

In this field, the influence has been primarily in the opposite direction A definitely increasing number of Hollywood's outstanding technicians have been engaged by foreign producers, especially in England In that country, too, more than a few American firms have established either branches or Anglo-American subsidiary companies to serve British producers Notably among them are such firms as Male-Richardson, Technicolor, and others, who have British affiliate companies, and the Dunning Process Co., with a working agreement with the Humphries Laboratory making both Dunning Process shots and the new Dunningcolor process available on both sides of the Atlantic Cinecolor, on the other hand, has established trans-Pacific connections, with a color-laboratory in the Orient

At least one American producer—Walter Wanger—is planning to produce American productions in Italy, in collaboration with the Italian Government News reports indicate that the Italians are planning a determined assault on a place in the production sun

Raw Materials.

Insofar as professional film is concerned, the improvements have been largely in detail, and unpublicized The Agfa firm quietly introduced a new film bearing the old name, "Superpan," but featuring increased speed and improved fine-grain characteristics Similarly, the same firm has replaced its previous "Finapan" background-film with a new emulsion of softer gradation, but the same name The Agfa Infra-Red sensitive film, recipient of an Academy technical award, has gained notably in popularity, being used in every studio Du Pont has made similar improvements in detail, but none of a revolutionary nature The Eastman forces report similarly, indicating that while many detail improvements were made in all emulsions, only one professional film was deemed sufficiently changed to merit a new type classification This is the "1357" sound-recording positive, made for variable-area recording by ultra-violet light Under ordinary light, this emulsion shows little, if any change from the previous "1359" type, but it has somewhat more sensitivity in the ultra-violet region

In substandard materials there has been considerably more activity Most notable, unquestionably, is the remarkable popularity of Eastman's Kodachrome natural-color film Despite its greater cost, this film is proving at least as popular as black-and-white (as judged by the volume of both handled in Eastman processing-plants) In some districts, it is reported that 60% of the plant's output is Kodachrome processing, with the remaining 40% spread over all types of black-and-white

During the year, a number of important advances have been made in Kodachrome Early in the year, a special Kodachrome emulsion, known as "Type A," was developed for use under incandescent lights Soon after, both emulsions were made available for users of 8mm cameras Early in the fall, improvements in processing, and also in a new emulsion, increased the daylight-speed of the film notably For earlier emulsions, the Weston-speed rating was increased by processing changes from 4 (15° Scheiner) to 6 (17° Scheiner) The new emulsion ("9120" and over) combined with the new processing, raises the speed-rating to approximately 10 (19° Scheiner) At the same time, 35mm Kodachrome for miniature cameras (Leica, Contax, etc.) was made available

In the substandard black-and-white field, Agfa also introduced a new high-speed Panchromatic 16mm film known as "Hypan," and described as an intermediate between regular panchromatic and Superpan, at a price more popular than that of Superpan

Gevaert introduced its 16mm reversal film to the American market, and is also manufacturing a low-cost pre-split 8mm film for the new Univex 8mm camera

Cameras.

The hoped-for noiseless camera did not put in an appearance during 1936, but a very welcome sign of progress was the fact that several studios in this country have invested in new and modern camera equipments Samuel Goldwyn put a number of the de Luxe Mitchell "NC" self-blimped cameras into service Paramount is re-equipping with the latest type of silenced Mitchells, 10

Progress in the Industry During 1936

by
The Editors

of which ore going into service immediotely The De Brie "Super-Parva" comero, integrally blimped, mode its debut on actual production in Hollywood, though used for some time in Europe, and in studios in New York, Detroit, and elsewhere Severol have been used on production ot the Twentieth-Century-Fox studio, ond ot Universol

An interesting new color-comero was developed by the Dunning Process Company This comero uses two films, side by side, possing through o double pilot-pin movement, ond receiving their imoges through o Horrison "Multichrome" optical unit on the lens This design eliminotes the loss of definition in the rear (red) negative, common to bipock processes The comera also incorporotes o noteworthy feoture by which the filter-bolonce is controlloble, and may be adjusted by visuol inspection through the finder

In the substondord field, Bell & Howell supplemented their "Straight 8" Filmo camero (using pre-slit 8mm film) with o virtually identicol model for standard 8mm The Eostman Kodok Compony introduced on excellent mogazine-looding 16mm comera embodying numerous refinements As this goes to press, home-movie making is being brought to o vast new group with the introduction of the Univex 8mm camera This will sell for approximately $12, ond use pre-slit Gevoert 8mm film retoiling ot 60c per roll, with on additional chorge of 30c for processing A similorly low-priced projector is olso mode, bringing the cost of buying and operating a home-movie outfit within the reoch of thousands who previously could not afford the hobby

Accessories.

The Feorless Comero Company introduced a new camero-dolly in which the features of both the crane-type ("Velocilotor") and the turntable-type ("Rotambulotor") ore combined In it a spring-counterbolonced crane arm is mounted on a revolving turntoble, which in turn is carried on o four-wheeled chassis

Emil Oster, Comero Executive ot the Columbia Studio, developed on accessory which should be invaluable for high-speed camerowork This is o motor-drive which eliminates the complication and uncertointy of hondcranking a high-speed shot through a gear-box The new drive consists of a 110-Volt Universal series-wound motor copable of speeds up to 12,000 rpm This drives the comera direct The motor's speed is controlled by o remote-control rheostat and the comero speed is indicoted by o tochometer coupled between motor ond comero The device permits operotion by remote control ot ony speed from 24 to 192 frames per second, and even ot full speed storts quickly ond will pull a full 1,000-ft roll of film through the movement

The Fried Comera Co developed a special underwater housing for the three-color Technicolor comera

Several improved types of blimps hove been developed both by the studios themselves and by equipment firms The Roby blimp is goining populority, being used in many studios Specially modified Roby blimps ore being ordered in quantity to house Poromount's new Mitchell cameras

During the year the new Photoscop wos brought into the American market This electric photo meter by an orrongement of pre-setting both film speed ond shutter speed gives o direct lens reoding

Lenses

An outstonding speciol-purpose development is o universal-focus lens-mount developed by Hol Mohr, A S C. This makes use of o standord Leica "Summor" lens, which is mounted in o boll-ond-split-socket mount so thot the lens moy be rototed obout its opticol centre, or nodol point In use this permits an effect similar to thot obtoined with o swing-back "still" comero, i e oltering the plone of focus from o plone ot right ongles to the optical centre-line of the camera to o diagonol position relotive to the camero This gives an effect of universal focus olong this diagonol plane, though the focus drops off normolly on both sides thereof

Lighting

The trend to lower levels of illuminotion ond fewer lighting units still continues This is particulorly noticeable in Technicolor cinemotography, ond is attributoble olike to improvements in the process itself, more efficient beom-distribution on the part of the new H I Arc spotlighting units, ond to increasing fomiliority with the process

Mole-Richordson introduced severol new Fresnel-lensed lomps in both the Incondescent ond the Arc types These include the (incondescent) "Senior Solorspot," a 5 000-Wott unit, the "Ultro H I Arc," o 150-Ampere high intensity unit, ond the "Type 60," o smoll 60-Ampere orc said to outperform the older 80-Ampere rotaries The Fresnel-lensed "Solarspots" came into generol use in every studio Twentieth-Century-Fox announced a progrom of completely replacing reflector lomps with these new units

A new Photoflood globe known os the "No 2 Photoflood" wos introduced by Generol Electric It is roted ot twice the intensity of the familior No 1 Photoflood, ond hos burning life of six hours

Special-process Cinematography.

The outstonding development in this field wos legol rather thon technicol It was a cross-licensing ogreement by which the major producers arranged to effectively pool all existing patents relating to speciol-process cinematography, and provide for licensing under future patents A provision is olso made by which non-members of the ogreement such os Independent producers, industrial studios etc , may obtoin licenses This move quashed on

Continued on page 510

Rhythmic Optical Effects for Musical Pictures

by
Vernon L. Walker, A.S.C.
Chief of Camera Effects, RKO Studio

ABOUT A DOZEN years ago, the Russians developed a technique of rhythmic cutting which they termed "Montage." It was simply the basic silent-picture cutting technique developed to accent rhythm—but it was most effective. Here in America, we added to this technique the special effects obtainable through optical printing, and made it a part of our own pictures. When sound came we synchronized music sound-effects to the rhythm of the montage, and found a new means of expressiveness.

In these applications, especially when used in dramatic pictures, the relationship between the musical and visual rhythms must of necessity be extremely subtle. In the actor's phrase, the trick must be "underplayed" if it is not to disturb the dramatic values of the story.

During the last three or four years, however, the search for novelty in musical films has led to a new use of this eye-and-ear rhythm wherein the rhythm is deliberately accented to heighten both the effect of rhythm and the effect of novelty. Here, filmic and musical rhythm is stressed—exaggerated—until it is obvious, a "montage in swing-time," as it were.

This newer use of rhythmic technique would be virtually impossible without today's optical-printing technique. Dramatic montages would still be possible without the optical printer, in some cases they might even be better if the cutter's shears was the only available tool. But music-film rhythm tricks have from their inception been based on optical printing, and especially on novelty optical transitions. It is a source of great gratification to me that the RKO Special Effects staff, and particularly Optical-printer expert Lynn Dunn, have been the pioneers in this field. This first hint of this new technique occurred about four years ago, in a little musical short entitled "So This is Harris." This was simply an experiment in synchronizing trick optical transitions with accentuated musical rhythms, but it received an unusual response from the press and public. Literally, it was the starting-point of the modern musical.

There followed "Melody Cruise," the first musical feature made with this technique. It was, as one critic expressed it, "a rhapsody for optical printer, accompanied by Charlie Ruggles." Next came "Flying Down to Rio," which really introduced both Fred Astaire and the modern concept of a music-film. From it, the chain of Astaire musicals grew, each of which has made a more comprehensive use of optico-rhythmic trickery than its predecessor. So far, the culmination of this development has been the "shadow-dance" ("Bojangles of Harlem") number in "Swing Time," which many critics have termed the high-spot of the picture.

While space does not permit a full analysis of the development of this technique, it may be mentioned that at first all that was attempted was a single transition, accompanied by proper musical effects. For instance, in one of these earlier films a polka-dot transition was used, in which the new scene appeared in a number of irregularly spaced round patches on the old one, to a tinkling musical accompaniment that struck a note at the appearance of each circle. From this things have progressed until now we often plan a whole dance or song sequence as a unit, with action, music, and "wipes" in perfect, highly rhythmic synchronism. Optical tricks are also used, as in the shadow dance, as a basic part of an apparently straightforward scene, to create novel effects.

This technique requires special planning, of course, and often special techniques and equipment. In an ordinary dramatic montage, we generally produce the visual effect first, and let the musicians devise the sound and music accompaniment afterwards. In a musical, this must be reversed. The music is written first, and we must pattern our optical treatment to coordinate with it. This usually begins in a serious "story conference" between Director, writers, and special-effects staff. Ideas are suggested, changed, revised and revamped, by the time the shot is completed, no one man can take full credit for the idea, though Lynn Dunn, as the optical printer expert, usually deserves credit for the actual execution of the shot.

In some instances, the finished shot may be a composite assembled by means of several different trick processes. For instance, in one picture we had a song-sequence in which the scene behind the singer changed several times to show what he was singing about. These backgrounds were made by straightforward photography. Then they were joined together with effectively rhythmic optical wipes, on the optical printer. Finally, they were placed behind the singer by the familiar projection-background process. Some of the background-shots, if I recall aright, also contained miniatures, and the scene as a whole was bound to the rest of the picture with optical wipes.

A virtually unlimited range of possibilities for rhythmic wipes can be made by combining moving film-mattes with ingenuity in an optical printer. A dripping wipe, for instance or a revolving one, is not only unusual on the screen, but effective when set to music. The "turnover" transitions used in "Flying Down to Rio" for introducing the characters can also be played rhythmically, as can the "card" wipe introduced in the same picture. Some of these require special optical printer attachments, such as a means for moving the printing-head, special moving mechanical mattes, and so on.

The "shadow dance" number required the use of a somewhat complicated system of optical printing, in which two or more printer-heads are used in connection with a single camera-head and a partially-reflecting mirror. In making this shot, we photographed the shadows before we photographed the figure that apparently cast them.

Continued on page 514



Showing some of the principal lights for a color "set-up." Tony Gaudio in light sunshade under camera.

Lighting Color on a Black-and-White Schedule

by
Gaetana Gaudio, A.S.C.

I HAVE JUST finished photographing a Technicolor feature on almost exactly the same schedule that would have been allowed for the same job in black-and-white. We made "God's Country and the Woman" in exactly 59 shooting days, which included a long and strenuous location trip to northern Washington.

In the studio, we made our interiors almost exactly the way we would have done them in monochrome. Unit for unit, I did not change my lighting a bit for color. The only concession I made to the three-color camera was that where, in black-and-white, I would ordinarily use a "broad" or a "rifle" for general lighting, I substituted a Side Arc, and where I would use a "Junior Solarspot" for spotlighting black-and-white, I used a "H I Arc" for color. The arc units radiate a more intense light, it is true, but the increase is not so great that I'd be afraid to step into the same set with a black-and-white camera, and guarantee equally good monochrome photography. The electrical load was undoubtedly increased—but not enough to make the studio's financial men shake their heads.

All of this was an amazing change from the conditions I encountered seven years ago when I photographed "On With the Show," the first "all-talkie" musical in color. In those days, everything was a problem. Certain colors had to be avoided, since the process wouldn't reproduce them, others had to be achieved by showing the camera an entirely different tone. Make-up was unbelievably unnatural. But the biggest problem was lighting. The two-color Technicolor of those old days demanded an unbelievable amount of light. To make matters worse, we had only the old, inefficient "broadsides" and Sun Arcs. They were noisy. They flickered badly, often ruining our best "takes." And they threw very unsatisfactory beams.

Today, things are different. On "God's Country and the Woman" I used about one-third less light than I did

Continued on page 512



Henry Sharp A S C

The Dignity of Cinematographic Simplicity

by
Harry Burdick

IF YOU WERE to ask of Henry Sharp A S C, what he considers the paramount premise of cinematographic compositions—and there's no good reason why you shouldn't—he will immediately and enthusiastically sum it up in the one word Simplicity

If pressed, he will expand in Websterian definitiveness and particularize that, to him, pictures flowing from his cameras should be sincere, natural, intelligible clear and devoid of excessive or artificial ornament

He stresses a straight-forward, comprehensible recitation of pictorial story uncluttered with extraneous and irrelevant matter

Candidly, he confesses to having come under the influence of several of his immediate circle of friends They are theater owners Close to the picture pulse of the public these exhibitors are reliable barometers of audience preferences They are constantly reporting to Sharp that the cash customers look for two prime factors in their screen amusement—Star and Story

In their entertainment-seeking minds, audiences prefer films that unfold engaging story development in style that can be followed without undue mental effort

Tempo of current film construction is rapid Scenes flow across the screen in speedy order Fast, vivid cuts are prevailing practice These scenes flow past the audience eye There is no time for elaborate and detailed observation of miscellaneous detail There is time only for a desired impression to be obtained This means bold strokes, emphasis on major items

Why then, asks Sharp, present a family living room as a display room of a furniture maker? Such multiplicity of scene embellishment serves only to detract interest away from the salient story.

Not that he suggests returning to two-wall sets and painted back-drops Not at all The most lavish production lends itself to his underlying trend of technique

Audiences look for quality in production But seven chairs, as instance, of vogue and assorted antecedents do not necessarily imply the tone afforded by a single chair of charm and dignity

There is character in line and dignity in simplicity Nurtured to suitable length it can be awe-inspiring in appeal Sharp cites the noted granite shaft honoring George Washington in the nation's capital Surely, it would not be the more impressive were it engraved with whirligigs, scrolls and geegaws

The old school of painters, the Old Masters, knew the untiring charm of this technique One can sit and gaze for hours at their works in Old World galleries, every minute bringing new discoveries of story told in simple line and color Yet the most hurried glance captures the spirit imbued to the canvas

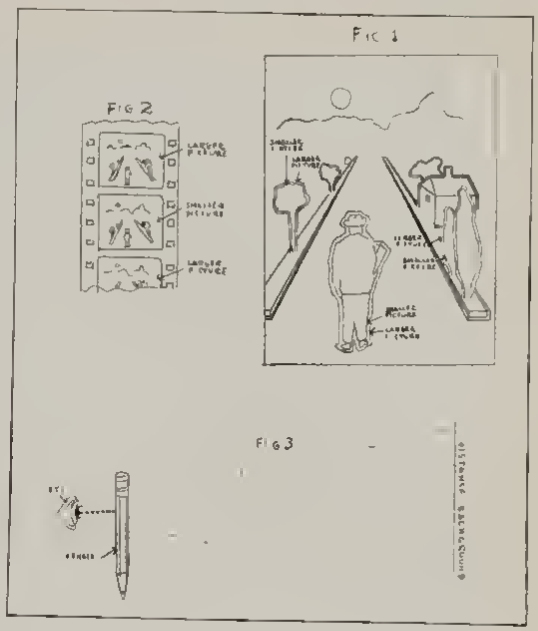
It is reverse to the blatantly dressed woman whose furbelows blind passible admirers to the wearer's personality

Sharp gains these cinematographic effects by scrupulous elimination of disturbing and detouring detail Keen consideration for composition along sound and recognized artistic bases Adroit italicizing by light of dominant motivation, with detail falling away to subordinate shadow

Sharp subscribes to the old-fashioned notion that motion pictures should move—that story should be revealed so far as possible by visual movement on the screen Theoretically at least, he holds, the picture of itself if stripped of its sound track should tell an understandable and audience-holding tale This, he maintains, is still the **picture** business

On such a substantial picture base, dialogue, sound and music can be erected as superstructures to top off the

Continued on page 513



Experimenting with Third Dimensional Motion Pictures

by **David Gordon**

Editor's Note We offer this theory on Third Dimension pictures for those who are experimenting with this sort of photography The author does not make extravagant claims for it but presents it to those other experimenters for what it is worth Seemingly he has patented some phases of it Expositions of this nature are interesting to those thinking along the same line We know that third dimension in pictures would be a more important advance than color

NO VISUAL APPARATUS is required by the audience to obtain the effect of depth in a theatre A recent demonstration was given at my home Some of the scenes showed a true depth—such depth as could be seen in a stereoscope In the "Bridgeport Sunday Post" paper of August 23rd also a few words were mentioned as a third dimension lens in the "Film Daily" of August 26th This invention is now patent pending A person will see the third dimensional effect with two eyes or one eye, no aid to the eye is necessary

Many attempts have heretofore been made in the field, particularly of motion pictures, to solve satisfactorily the problem of obtaining a stereoscopic effect to the screen Left and right eye or angle images have been used According to the present invention, the problem is solved according to another theory This theory, the correctness of which I have demonstrated in practice, is that if any object in a field of view is viewed when x-feet distance and then viewed as it appears x+y feet or x-y feet distance and these two pictures are viewed not simultaneously, but consecutively, and with that rapidity of consecutive satisfactory in utilizing the phenomenon of persistency of vision which made the first motion picture possible, a satisfactory illusion of depth and solidity is obtained According to the present invention the images are not taken from different angles, but from the same angle

When a scene is being photographed objects which are at different distances from the lens of the camera, the nearest object will show the greatest difference between the two different size images, the next nearest object will show the next greatest difference, and this will continue according to the differentiations indicated, with regard to more and more distance objects throughout the foreground and the background Thus very far distance objects will have practically no depth or solidity, but near and near objects will have greater relief

As will be seen in Fig 1 there are two different size images photographed from life, one a smaller picture superimposed over a larger picture, for instance, the outlines marked smaller picture showing the arrows pointing to a tree, a man, a bush while the outlines marked larger pictures with the arrows pointing to said tree, said man, and said bush Those objects in the foreground show a comparatively large size differentiation, while the image components at the extreme background, notably the far reaches of the sidewalks the distance hill lines, and the sun above the latter show no differentiation whatsoever

Fig 2 shows the different size pictures are not superimposed as in Fig 1, but instead the small and large pictures are separated and photographed in the usual way, first the large, then the small picture, then the large picture, etc, according to the invention in alternate rapidity

In photographing the two different size images alternately as in Fig 2, the lens of the camera can be moved slightly forward to the scene and then back again, or the lens with the film can be moved at the same time to cause first the large and then the small image, of course synchronization will be necessary with the shutter of the camera A lens can be placed in front of the camera and moved, or else bodily moving the camera and the like to cause small and large pictures

The idea was perceived from the idea that a person sees depth in life with one eye as well as two eyes Fig 3 illustrates a very simple experiment which anyone can perform without special apparatus to demonstrate the car-

Continued on page 514



A.S.C. MEMBERS ON PARADE

• **Robert Planck, A.S.C.**, has just finished a picture at Fox-20th Century and is enjoying a few days vacation.

• **E. O. Blackburn, A.S.C.** is a mighty busy hombre keeping Bill Germon busy German is on from New York City for a few weeks to keep in touch with west coast production activities

• **Pev Marley, A.S.C.,** is back on the job at R K O after a few weeks of illness However, before reporting for work Pev spent several days on the golf course to sort of get his strength back, or was it to keep that stance in good working order?

• **Sol Polito, A S C.**, has been given the soft job of shooting a few tests Sol appreciated this after the hard schedule he has been going through

• **Norbert Brodine, A.S.C.,** is shooting the Hal Roach musical This is one of the most ambitious pictures attempted at this studio

• **Hal Mohr, A.S.C.,** has been given a script to look over at Universal studios with the idea of Hal directing that opus Hal has not made his decision.

• **Clyde DeVinna and Les White, A.S.C.,** are roaming again on a "Captain Courageous" unit for M G M Just where they are we do not know It is always safe to say that De Vinna is somewhere out of the city. He is the "most roaminest" cinematographer in Hollywood

• **Geo. Robinson, A.S.C.,** started camera work at R K O. for the first independent Joe E Brown production for major release

Presenting Arthur Miller, A S C , and his Fox-20th Century camera crew on their way to work— or at least on their way. No. 1 man is Arthur Miller, behind him is Joe LeShelle, Operative, and behind Joe is Assistant Cameraman Bill Abbett. We do not know the last men . . . he undoubtedly is number one pedaler



"As it must to every man---
Death came to"

CHESTER LYONS, A.S.C.

• **Chester Lyons, A.S.C.,** one of Hollywood's ranking ace cameramen, succumbed from a heart attack at his camera on Friday, November 27, on the 20th Century-Fox Western Avenue stage while directing the photography on scenes of "Death in Paradise Canyon"

At the time of his passing Cinematographer Lyons was 51 years of age, and had lived in Los Angeles 21 years He was born in Westfield, N Y

Lyons was more familiarly known as Chet, and as an abbreviated or nickname usually indicates, was beloved by those who addressed him as "Chet" and their numbers were many His memory will be held precious by those who assisted him He was unselfish in his efforts to give the men around him every opportunity to advance in their chosen profession He was almost lavish in bestowing information, to those around him who sought it, from his rich experience in cinematography Men like Chet Lyons do not die, they leave too much behind of themselves that they have so unselfishly given to others

Among some of the pictures to Lyons' credit in recent years are "White Hunter," "Romana," "Lilliom," "Lightnin'," and many others For eight years he was with the M G M studios and more recently with 20th Century-Fox

He leaves his widow, Mrs Katherine Lyons

• **Gregg Toland, A.S.C.,** will probably draw an assignment on the Fox 20th Century lot as Goldwyn will probably not start production for another month

• **Lucien Andriot, A.S.C.,** has drawn the new DeBrie camera for his next production on the Fox 20th Century lot.

• **Ted Tetzlaff, A.S.C.,** has been drafted by Carole Lombard to her next picture which starts immediately at Paramount

• **David Abel, A.S.C.,** is lensing the new Walter Wanger picture "History is Made at Night"

• **Leo Tover, A.S.C.,** is back from the hospital after a siege of branchial pneumonia He is spending the next several weeks at Palm Springs recuperating

• **John W. Boyle, A.S.C.,** won a notable victory in London With the help of such stalwarts as **Al Gilks,** A S C , **James Howe,** A S C , and others of Hollywood's cine-technical outpost in London, Johnny achieved the ne plus ultra —or something he persuaded the commissary at Korda's Denham studio to brew American coffee!

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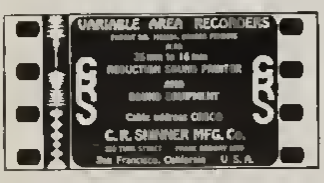
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Technical Progress in the Industry During 1936

Continued from page 503

involved tangle of lawsuits and countersuits growing out of patent infringement claims and should go far to advance progress in this important field, as it virtually eliminates the ever-present fear of imitation and infringement Notable use has been made of special-process cinematography, and especially optical printing, in musical films Projected-background process shots have been made in Technicolor extensive tests having been made by Vernon L Walker, A S C , for Pioneer Productions and RKO, and the process having been used in actual production by Gaetano Gaudio, A S C , at Warner Bros

Natural-color Cinematography

While a year ago it was forecast that 1936 would see the production of nearly a score of Technicolor productions, the year has actually seen five produced in this country, and a sixth in England

At least an equal number of color features have been made by independent producers, using two-color processes such as Cinecolor, Magnacolor, and the like, including Hirlocolor a Magnacolor variant

As nearly as can be determined now, at least a dozen color features are planned for 1937 These include 4 in Technicolor (one each from Goldwyn, Selznick-International, Walter Wanger and Warner Bros) and eight in Magnacolor, evenly divided between Hirliman-Grand National and Republic This is not absolutely accurate, however, as the plans of several firms are understood to be changing Selznick, for example, is reported planning to keep one Technicolor film in production at all times, and Paramount is understood to be committed for two Technicolor features, while Technicolor is reported planning to film the coronation of King Edward VIII This likewise does not take into consideration the probable activities of Cinecolor, Dunningcolor, etc , nor any London activities

A highly significant development was the work done on the Keller-Dorian (lenticular film additive) process by a group of Paramount and Eastman engineers at the Paramount studio The process is reported to offer a combination of outstanding quality with simplicity and economy; its use on production is said to wait only on the ironing out of contractural details, delayed by Paramount's recent reorganization The process appears to offer many advantages not the least being that it does not require a special color-laboratory, and can be photographed and processed by the studio's regular staff

Another promising contender is the new Dunningcolor process It is a wide-range two-color process which by means of a special camera and special printing methods permits the use of standard negative film and standard (single-coated) positive film, and gives excellent, well-defined subtractive prints

Considerable undercover experimentation in color has gone on in virtually every studio Both MGM and RKO have experimented with the Gilmore "Cosmacolor," while at Universal, considerable work has been done with "Telca," an optical process, originally additive

There has been an increasing demand for natural-color stills, and every major studio has been searching for a really commercial method of producing them At present, everything from hand-coloring to "one-shot" cameras is being used, the most popular medium, perhaps, being the Dufaycolor transparency process The Curtis color camera, an excellent, moderate-priced "one-shot" instrument, is being used in several studios, with good results

Make-Up.

Two important developments may be chronicled in this field The Max Factor laboratories introduced the "T-D" series of make-up materials, primarily a range for the new Technicolor, but also applicable to black-and-white Jack Dawn, make-up head at MGM, developed a truly remarkable material and technique for character make-up, by which the actual contour of the head and face may be sculptured to suit the part, and convincing bald heads created without sacrificing the player's hair

Film Standards.

In America, the industry is standardizing on 2,000-ft reels for release and is also establishing standards for leader and change-over cueing The S M P E single-perforation 16mm sound-on-film dimension appears to be on the way to world-wide acceptance as standard for 16mm sound.

Sound Recording.

Significant of the length of time elapsed since the Vitaphone took Hollywood by storm, and virtually every producer save RKO and Pathe contracted for Western Electric sound, several of the major studios changed to RCA recording A sweeping reduction in royalties, service-charges and other costs accurred, more or less incidental to this

Technically, the most important development in recording was the introduction of RCA-Photophone's system of Ultra-violet recording This may be ap-

plied to any RCA-Photophone recorder By means of a special lamp and filter, the recording is done by ultra-violet light, reducing the halation or reflection of the recording-light from the film-base, due to shallower penetration by the beam of "black light," and consequently giving a more clearly-defined sound-track, and better quality A similar modification can be used to improve the quality of the print

Western Electric introduced "Mirrophonic" reproducing equipment, a monaural development of the binaural system experimented with by Leopold Stokowski and the Bell Telephone engineers This uses a higher-quality amplifier, and improved horns The same firm has also developed improved studio recording channels, and a wholly new portable recorder, both of which are being used in several major studios

The two-way multiple-horn system, developed by Douglas Shearer A S C , at MGM, has been used in several theatres for the de Luxe roadshow presentations of "The Great Ziegfeld," "Romeo and Juliet" etc

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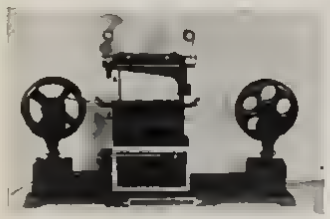
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may also be noted that 16mm sound-on-film rental libraries have been gaining considerably Some theotrical productions have been reduced to 16mm for this purpose, and there are constant rumors that various major producers are about to enter this field on a large scale In England, Gaumont-British is understood to be doing so, despite protests from exhibitors

Projection.

As prosperity is visibly returning to the nation's box-offices, an increasing number of theatres are re-equipping their projection installations High-intensity arc lamphouses using the National Carbon Company's "Suprex" carbons for maximum illumination, are becoming more and more common in the better theatres Surveys show a gratifying improvement in screen-brilliancy averages Dr John G Capstaff, of the Eastmon Laboratories, has devised an optical system which increases the light-output 380% while permitting a reduction in Amperage from well over 100 (usually 120 or more) to an average of 85 This should be of volue both in theotres, where the advance of color is definitely a problem in screen-brilliancy, and in the projected-background process of composite cinematography

Laboratories and Methods.

During the year, one of Hollywood's most important commercial laboratories —the Consolidated Film Industries' plant—was completely modernized, and a new firm—International Cinema Laboratories—put up an entirely new, and most modern plant Several of the studio-owned laboratories have modernizatian plans projected, and at least one is reported to be contemplating an entirely new plant

The Bell & Howell automatic production printer came into additional use in several laboratories

The Fried Camera Company introduced two new moderotely-priced printers—one for 35mm and one for 16mm As companions to these printers, the some firm produced 35mm and 16mm light-testing machines for print timing

An interesting small developing-machine was developed by Hugh Gwynne and the World Motion Picture Equipment Co This plant is small enough to be portable—it can be carried into the field in a light truck—and can be operated by one man Operating two fixed film-speeds (for negative and for positive, respectively) the machine obtains a remarkably wide variation in development timing by altering the length of the loops in any solution

In the Paramount experiments with Keller-Dorian color, standard developing-machines were adapted to reversal-processing, and it was proven possible to make excellent color-prints from the lenticular-base Keller-Dorian reversal film Commercially satisfactory black-and-white prints were also made from the lenticular-based originals

Lighting Color on Black-and-White Schedule

Continued from page 505

an the old two-color process of a few years ago I was down mighty close to my normal black-and-white lighting level There are a number of factors responsible for this change Naturally, the films used are faster So, too, are the lenses

Our interior sets for "God's Country and the Woman" were if anything less cluttered up with lamps than the average black-and-white set In fact, I think we had an advantage over the average black-and-white company, for we had all the latest equipment (And here I want to correct a mistaken rumor that we made our interiors on an out-door stage in the usual manner.)

I don't think color slowed us down appreciably on some days we made as many as 22 different set-ups For a major studio production, that's plenty of speed even in black-and-white!

We also pioneered in something else that had not yet been done in a Technicolor production We made projected-background process shots There is a sequence played in an airplane, flying over the lumber country of the Northwest, and finally landing

We used one of the process department's smaller standard screens—one about 8 x 10 feet in size We used one of their strongest projectors with the light stepped up as much as possible

Of course, there are still some things that Technicolor needs to improve before one can honestly say it is on an equal footing with black-and-white For instance, the camera, though a beautiful mechanism, is much bulkier than any black-and-white camera, and the 3-film movement naturally makes more noise In its big blimp, it is an ex-

fully heavy thing to move around easily, and its size makes it difficult, if not impossible to work in some crowded corners where a black-and-white outfit would only be inconvenienced The three negatives involved make the matter of lap-dissolves more of a problem, for there are three sets of negatives to be optically duped, and the three sets of fades must be perfectly synchronized The same, too, is true of "wipes" and such tricks

There are some tricks of camera-manipulation which many directors like in black-and-white, that are absolutely impractical in color For instance, fast pans should be avoided, for in a color picture they give a flickery blur of color that is very hard on the eyes If they must be used, they should be planned for by having the main color-masses of the set run in horizontal lines

Perhaps most important, is the attitude some people take toward color It is true that in color one is working with something different in many ways from our accepted black-and-white but shrouding it with mystery won't prove anything But there is an element who seem to feel that color cinematography is something ordinary picture-folk can't understand That is pure bosh! Picture-making is picture-making no matter what you're shooting, and those of us who have spent years learning the fundamentals of the job ought to be competent to take a new development like color in our stride Of course it means new tools to work with, new problems and new ways of expressing many new thoughts but it is still the same basic job of putting entertainment on celluloid

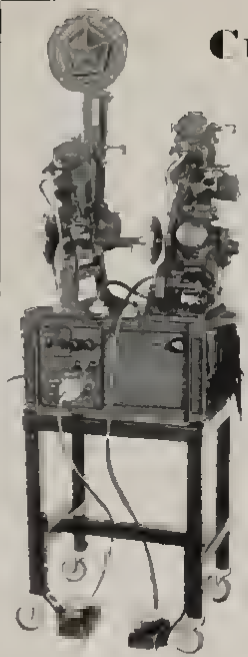
The Dignity of Cinematographic Simplicity

Continued from page 506

complete entertainment entree To him it is insufficient for a cinematographer to hide behind "the dialogue will carry it," when placing difficult situations on negative

Sharp's appraisal of cinematic duties and obligations is not a case of guess or surmise His career with cameras goes back two decades Back, indeed, to 1915, when Thomas Dickson was gaining directorial renown amid the orange trees happily blossoming where now stands the Fox studio at Western Avenue

He did the final four of the Douglas Fairbanks extravaganzas following a seven year service with the late Thomas Ince He is steeped in the enduring fundamentals of fashioning film fare



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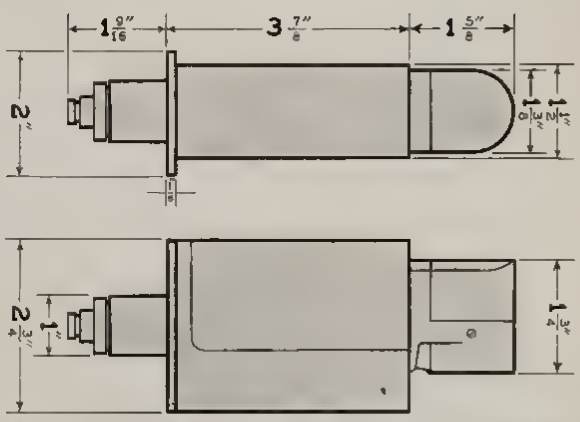
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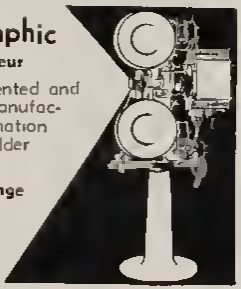
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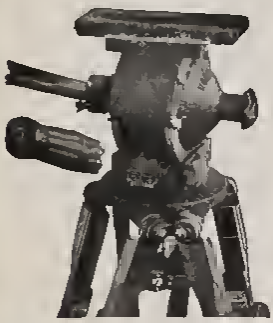
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Experimenting with Third Dimensional Motion Pictures

Continued from page 507

rectness of the theory upon which the present invention is based Such theory has to do with the phenomenon characteristic of one human eye acting alone and without the companion eye Let the eye of Fig 3 be one of two eyes, the other of which is shut If the pencil be held close to the eye, as indicated by the line of sight, shown as a heavy line, the eye concentrates on the pencil, and as the eye automatically comes to focus, said pencil will stand out in space or marked relief from that of objects more distant than the pencil The further the pencil is held from the eye the less the pencil stands out in relief, the closer the pencil is held to the eye, the greater the pencil stands out in relief While the eye concentrates on the pencil, the latter is seen as one image while the background becomes smaller and blurs into many images When the eye concentrates on an object in the background instead of on the pencil, the background becames one image, while the pencil becames blurred showing many images Further, if the pencil be viewed rather close to the eye and then viewed after being moved to a slightly different spacing from the eye, and this be repeated several times very rapidly, the retina of the eye will change focus with equal rapidity and a really startling demonstration is given of how by the present invention an appearance of depth or solidity is obtained without the natural binocular vision obtained when both of a pair of human eyes are gazing at an actual life scene


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Rhythmic Optical Effects for Musical Pictures

Continued from page 504

For this part of the shat, Fred Astaire simply danced before a blank white screen, on which a Sun Arc projected a clear shadow Next, he did his foreground dancing under ordinary lighting, but before a blank screen Finally the components—an optically printed composite of the two shadows, and the separate foreground shat—were combined by means of multiple optical printing to form the final composite negative Synchonizing the dancing was made easier by projecting the shadow-film onto a screen Astaire could watch while he did the foreground dancing Like all scenes of this description, it was photographed to a playback of pre-recorded music


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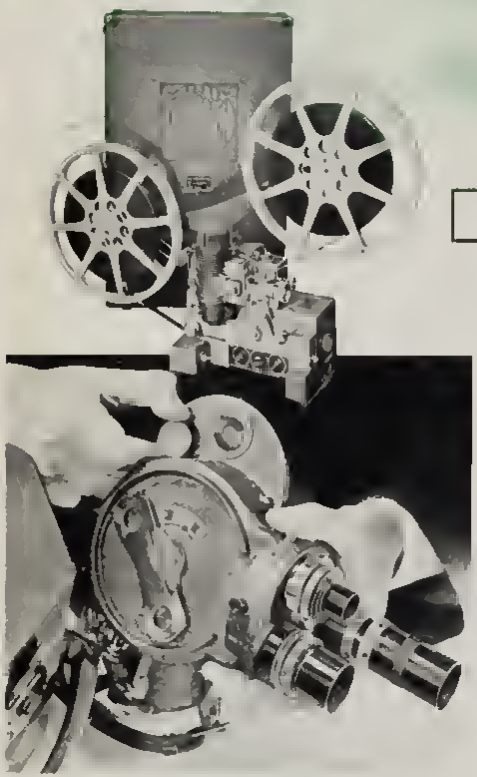
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Next Month . . .

● The big news of the month of course will be the announcement of the prize winners for 1936 Judges are busy going through the preliminary judging right now so as to bring the entry down to the final dozen or so Winners will be announced in the January issue

● A story telling you how you can learn about color shooting by studying the Garden of Allah One of the outstanding color productions in fact considered the first reel fine color job done professionally

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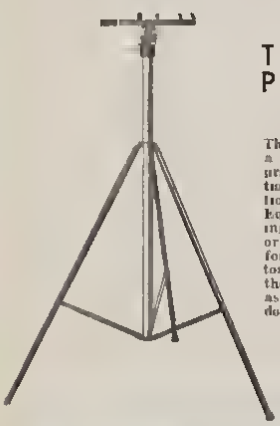
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Your Yuletide Documentary Film

by
Barry Staley

CHRISTMAS COMES but once a year—as the poet so truthfully sings It ushers in a period of gay hearthside pageantry, a kaleidoscopic pattern of distinctive color, custom and jollity It beckons to the creative cinematographic talents of every amateur filmer

So essentially a family institution, Christmas offers exceptional photographic opportunities to the compiler of domestic film albums The following outline skeletonizes a typical treatment of a film commemorating the happy Holiday Details may vary with facilities peculiar to varying communities But the general direction is charted

Here is shooting that can be spread over two to three weeks, picking shots as they occur and as time permits The interiors ask for your best lighting twists And such a colorful event seems a natural for color film, though black-and-white will do it full justice

MAIN TITLE MERRY CHRISTMAS—1936 (If you feel a bit ambitious, have the title set by a printer in Old English type and superimpose it above scene of a street Santa Claus in costume such as the Salvation Army places on many busy corners)

SCENE 1. LONG SHOT A downtown sidewalk thronged with package-laden shoppers Christmas street decorations are seen Snowflakes may be drifting down

SCENE 2 MEDIUM SHOT. The milling crowd of gift-buyers definitely a Holiday throng

SCENE 3. MEDIUM SHOT The traffic jam at a department store entrance, shoppers fighting their way in and out

SCENE 4 MEDIUM SHOT At a busy downtown intersection Traffic has stopped and eager shoppers swell to overflow the sidewalks, surging forward as the signal changes

SCENE 5 CLOSE SHOT. The home-going scrimmage at entrance to subway, street car or motor bus

SCENE 6 LONG SHOT A main thoroughfare choked with traffic If snow is piled along curbing or radiators are steaming, so much the better.

SCENE 7 MEDIUM SHOT Department store delivery wagon piled high with packages

SCENE 8 CLOSE SHOT Mail carrier struggling under overload of Christmas post

SCENE 9. MEDIUM SHOT of Mother returning from a day of shopping, arms full of Christmasy looking packages

SCENE 10 CLOSE SHOT Interior Mother stowing packages away on top shelf of closet

SCENE 11 MEDIUM SHOT A costumed Santa Claus is receiving a group of excited children

SCENE 12 CLOSE SHOT Santa and your youngsters in earnest conversation, with Santa making note of desired Christmas gifts

SCENE 13 LONG SHOT Your dining room A pile of packages same with store wrappings torn off and fluttering on floor On the table are Christmas gift wrappings—paper, Red Cross stamps, tinseled string etc

SCENE 14 MEDIUM SHOT At the table, Mother is wrapping a gift box

SCENE 15 CLOSE SHOT Of the neatly wrapped gift On a card, Mother writes "Merry Christmas to Sam"

SCENE 16 MEDIUM SHOT At a desk, Father is addressing envelopes for a stack of Christmas greeting cards

SCENE 17 CLOSE SHOT of Father at his task, intercut an INSERT of your Christmas card

SCENE 18 MEDIUM SHOT Exterior One of your front windows Through it Mother is seen hanging a be-ribboned holly wreath in the window

SCENE 19 LONG SHOT. Interior Your living room Under the happy supervision of Mother and the Children, Father brings in the Christmas tree and puts it in place

SCENE 20. MEDIUM SHOT At a low angle. The boxes and bundles of Christmas tree ornaments

SCENE 21. MEDIUM SHOT Family trimming the tree, inter-cut with CLOSE-UPS of Children's hands affixing ornaments

SCENE 22. LONG SHOT The trimmed tree Turn on lights (You may add a Close Shot, including the tree only, TILTING the camera down from top of tree to floor)

SCENE 23 CLOSE SHOT Small stockings are brought in and hung by the fireplace by the children

SCENE 24 MEDIUM SHOT The lighted tree with Father and Mother arranging the collection of gifts on and around it, and filling the children's stockings appropriately A fast FADE OUT

SCENE 25 MEDIUM SHOT Quickly FADE IN on children tumbling from their beds in eager fashion With an INSERT of clock reading about 5 30 on Christmas morning

SCENE 26 LONG SHOT of the Christmas tree Children come romping in followed by sleepy but smiling Mother and Father

SCENE 27 MEDIUM SHOT Children discovering their gifts, reading the identifying cards and showing their entranced happiness

Follow with Close Shots of all the family's collection of gifts, this for your record And contents of the Christmas stockings

SCENE 28 CLOSE SHOT The family's pile of received Christmas greetings—with INSERTS of any of uncommon interest

SCENE 29 MEDIUM SHOTS covering arrival of relatives and other guests Cut in scenes of Children at play with their newly acquired toys and playthings

SCENE 30 MEDIUM SHOT of the Christmas dinner-table with steaming dishes ready for serving, guests seated

SCENE 31 CLOSE-UP of Father uncorking a bottle of prized wine and proudly pouring it into glasses

Continued on page 534

Let's

ANY PICTURE, whether a super-feature or a home-movie, makes a better impression if its titles are cleverly made. Of course spoken titles and minor bits of description within a sequence should be kept simple and easily read, but the main title, and those that break the picture up into sequences, are much more effective if they are something out of the ordinary. Besides, title-making is more fun if you are trying something unusual. So here are a few ideas for trick titles.

Nearly everyone makes movies at the beach. Here's a trick that will put the seaside in your titles even though you live hundreds of miles away from the ocean. In a good-sized tray or a shallow, wooden tank, make yourself a little beach of sand and small stones. The "beach" should slant downward, and leave enough room at the nearer end of the tray to hold quite a bit of water. Next, make yourself a little sluice-box, so that you can suddenly let enough water into the tray to make a wave that washes up over the sand, and then recedes. Use a fairly soft front-light, and a good, strong cross-back light, and shoot the scene from slightly above and at a little angle. It is a good idea to have the camera running at its "slow-motion" speed. You begin shooting with the "beach" clear, and let a wave came down from your sluice-box. When the wave is at its highest up the beach, stop the camera. Now take some paraffin and shape it roughly into letters that spell out the wording of your title, and put it in the "beach." Sprinkle the letters well with sand, and make another wave, starting the camera when the wave is covering the "beach." As soon as that wave has run off, follow it with another one, again stopping the camera when it is full up. This time, smooth your roughly-formed letters into complete, finished ones, and bring them "in" with another wave. Finally, when you have exposed enough footage of the title, you can have another wave wash the letters away in the same manner, leaving only smooth wet sand. On the screen, of course, you see a sandy beach, a wave washes over it, and receding, reveals a suspicion of lettering, which the next wave changes into readable words with the letters apparently made of sand and standing out in high relief. Finally, a third wave washes the letters away, leaving only a sandy beach. It may be a good idea to use something like water glass in the water, to give the waves a more solid "body."

In professional pictures, you've seen scenes and titles apparently melt, and disintegrate into a formless smear? Well, here's a way to do it at home, without any of the special optical printing equipment needed professionally. You begin by making a transparency of your title with a still camera, using a good double-coated plate like the "Standard Orthonon." For a plain title, you can simply copy a drawn or typewritten title written in black on white paper; the plate naturally gives you white letters on a black field. For an "art" title, you can double-expose your transparency, copying the background from a still **negative,** so you'll get a positive image, and making a second exposure of your card with the wording.

Now put this into a simple shadow-box (like a photographer's retouching hood) and illuminate the transparency from behind with a strong light, like a photoflood. Line up your movie-camera in front of this, just as you would in any ordinary title-making.

Now—here's the trick. In making your transparency, you expose and develop the plate in the usual manner, but fix it in **plain** (not acid) hypo, **with no hardener.** This leaves the emulsion soft. You wash the plate as usual, but you only dry it enough to get the surface moisture out. When you shoot the title with your cine camera, after you've exposed enough footage so the words can be read, heat the plate, using either a blow-torch or a good-sized electric heater, in any event holding the heat-source as close as you can without getting it into your movie shot. The heat naturally melts the soft, moist emulsion, and the title disintegrates into a formless blob. Sometimes, depending on the way you heat the plate, it is a good idea to shoot such a title with the camera running below normal speed, so that the melt occurs faster on the screen, in some instances, you may have to use modified stop-motion. Naturally, you can get either of two effects: you can have the title melt away at the end of the shot, or you can have the "blob" unmelt itself and form the letters and picture. In the latter case, of course, shoot it with the camera upside-down. If you make two identical transparencies, you can even combine the two effects, making the unmelting with one plate, and the melting with the other. For the former, it's easier to turn the transparency upside-down than to invert and re-align the camera.

Another variation is to use this trick in conjunction with double-exposure cine work, shooting the background at one "take," and the letters at another. This way, you can have the letters melt without changing the background, and vice-versa.

Some time ago, I described a simple trick for making cloud-effect titles. It's a useful idea for travel-films, especially if your picture is one of an airline trip. The same trick can be worked either using negative film (which is to be cut into the picture, rather than printed), or using reversal film. I think it's more effective using negative.

Simply place a mirror flat on a table, and above it, at an angle, slant a sheet of opal glass. For illumination, focus a strong light—a spotlight if you have one—on a mirror, so that it reflects up onto the opal glass. The camera is trained on the glass. Paint your letters on the surface of the mirror with paste or mucilage, and then cover the mirror with a fine, smooth layer of sand. The sand that falls on the mucilage will naturally stick there, and form letters.

As your camera grinds, blow a gentle stream of air over the mirror. All the sand except that caught by the glue will swirl around, and will leave spots on the mirror. Shooting this with negative, the effect on the screen will be black, heavily-corrected sky wherever the mirror is clear, and white, swirly clouds where the sand is. As the clouds move, they will shape themselves into letters which spell out the title. If you use reversal film, of course, the clear spots will be the clouds, and the sand will represent the sky, so your title will cloud over, with clear sky spelling out the words.

Now, how about a title that writes itself? Of course, one way to do this is by stop-motion, exposing on any

Make Some Trick Titles

by
Jerome H. Ash, A.S.C.

sort of a card, a frame or two at a time, and building up the letters a little bit between each exposure But here is a way of getting a somewhat similar effect without stop-motion You begin with a sheet of plain, white tissue-paper On this, you write your title—in script, not printing—with a saturated solution of saltpetre When this is dry, line up the camera and the tissue, with perhaps a sheet of black cardboard a few inches back of the tissue All the lighting is from the front To make the title, start your camera, and touch the lighted end of a cigarette to the spot where you started the lettering The saltpetre-impregnated paper will sputter like a fuse, and will burn along, forming the words The black backing will make the burned section stand out clear and legible Of course, the saltpetre doesn't burn with a flame, so don't expect any flaming effects!

Kodachrome pictures really call for Kodachrome titles, and here are a few ideas for making natural-color "readers" One of the most effective ideas is to double-expose your title over a picture background The lettering can of course be in any color, on a black card, in general, I think white or silver letters are best For the pictorial background, you can use a great many things The handiest colored pictures are usually those printed in the better-class magazines, on calendars, etc. They will do excellently For titling Kodachrome travel films, you can find an almost inexhaustible supply of excellent natural-color photographs in back-numbers of the National Geographic magazine This magazine uses the best of color-stills, and reproduces them unusually well, while their photographers have ranged all over the world And you've no idea how effective a good Kodachrome art-title is until you see one on the screen I've seen some I thought even better than the pictures they decorate!

If you don't care to go to the trouble of double-exposing, you can often get fine results by lettering your title in white on a thin sheet of clear celluloid, which is placed over the background-picture But be sure there are no wrinkles in the celluloid!

Another simple way of making effective color titles is to use a black card, with the letters cut out On the back of the card you can glue a sheet of colored cellophane Illuminating this from behind, you can get a very striking effect, and by fading the illumination in and out you can make perfect fades

Cellophane in all its forms offers endless possibilities in Kodachrome titling For instance, you can use this same idea, but vary the effect by substituting for the sheet cellophane a log-cabin-wall arrangement of cellophane straws arranged in alternate colors Lit from behind, the effect is remarkable Cellophane straws, placed close together and running either vertically or horizontally, and back-lit, make a fine background for a double-exposed title, too, while if you want dark letters against this variegated, luminous background, you can easily make them on a sheet of clear cellophane placed just in front of the straws

If you want to add animation to this effect, begin with a similar pattern of the colored straws, preferably with the straws running horizontally, and mounted so that each individual straw may be rotated Paint your letters on the front of them with dark paint When the paint is dry, carefully turn each straw so that the portion of the letter on it is on the upper surface, and hidden from the lens Begin your shot with some footage of the background this way Then stop the camera while you revolve the uppermost straw until the parts of the letter appearing on it show Expose two or three frames, and stop again while you turn the next lower straw, and so on until all your lettering is revealed The letters will "wipe" themselves in Reversing the process, you can wipe the letters out, and by placing the straws upright or at an angle you can make horizontal or diagonal wipes

An interesting variation of this cellophane-straw idea is to take a ball and cover it with a thin coating of either plasticine or shellac, and stud the sticky surface with fragments of a mirror Hang this glittery, multifaceted ball behind your cellophane-straw curtain, and focus a spotlight on the ball so that its light is reflected onto the cellophane If you revolve the ball slowly during your shot innumerable little points of light dance across the colored curtain, changing in color as they pass from one colored straw to the next You can manage a great number of different effects with this trick, according to whether the reflected light is or is not supplemented by any other light from either before or behind the straws

You can also get some interesting effects with simple cut-out letters in a dark card and a moving color-pattern behind the openings For this, you can get Brigham's standard theatrical colored gelatin from a theatrical-supply store, at a cost of only a few cents a sheet In addition to solid colors and a rainbow-striped effect, you can get several patterns of variegated coloring: No 80, for instance, is a speckly mixture of green and yellow, No 85, green, red and clear, No 90, purple, green and clear, No 95, red, yellow, green blue and clear

In all of them, the colors are cloudy blobs, looking like so many drops of colored ink scattered closely on a moist plate, and just beginning to blend into one another at their edges Moving a sheet of this variegated gelatin, back-lit, behind a cut-out pattern, gives a very striking effect

If in double-exposed titles, you care for a kaleidoscopic background of color, it is easy enough to build a simple kaleidoscope You simply take a cardboard tube, about the size of the front of your lens-mount, line it with plastic wood or gesso, and fit inside it, edge to edge, several strips of mirror Then mount this on the lens by using a short strip of cardboard tubing a trifle larger, so that this collar fits over both lens and kaleidoscope-tube, but leaves room for the latter to revolve At the outer end of your kaleidoscope tube, put a sheet of ground glass, and inside it scatter some fragments of colored glass These can be all of one or two colors, but the more colors you use, the more bewildering the effect To make the

Continued on page 532

Micro-Filming the Smallest Known Organism

by
George K. Sherlock

HAVE YOU ever filmed an amoeba? No? Well, if you ever get around to doing it, you'll find it an extremely interesting job of cinematographic exercise. According to what a number of physicians and scientists tell me, I am the first man to have placed images of one on film.

The difficulties confronting the camera reposed in the fact that an amoeba is a very small and perishable subject. He is reputed to be the smallest living animal, a one-cell organism. He is one of the earliest known forms of life and the lowest form of animal life, low biologically, that is, not socially.

While his tribe has survived untold numbers of centuries, the individual can't stand much heat or light. Hence he's a long way from being a popular photographic subject.

I am constantly making films for commercial, professional and educational purposes. I have shot Caesarian births and football games, how locatives are compounded and what happens to old razor blades. But this was the first time I filmed something I couldn't see.

A little more than a year ago, a strange malady afflicted two farm workers in California. Visible symptoms comprised a sort of fungus growth appearing at various points on the skin surface. Reference to medical works convinced the attending medicos it was a disease known in some sections of Asia and in China, but not having been recorded in this country to that date. There is a name for it, of course, and a Greek one, but I can recall now only eight of its fifteen syllables.

And so it came about that the very extensive facilities of the Los Angeles County Hospital were called upon. From their studies of the two cases, the doctors concluded the trouble was being caused by a pathogenic amoeba,—or, rather a whole flock of pathogenic amoebae—being present in the blood stream.

The amoeba was isolated. This little fellow might be small but he sure was deadly, as was evidenced by the speed in which he killed a monkey or two into which a culture was injected.

Doctors studied him under a microscope. They made still pictures of him. They were at loss to know why this particular amoeba was malignant while others of the species are notoriously happy and peaceful.

It was decided to make motion picture studies of the disease germ for more exhaustive research. And that's where I entered the scene.

Micro-cinematography is not new—but it presents its problems. It consists of photographing on film the greatly magnified subject as seen in the eye-piece of the microscope.

I selected an Eastman Cine-Special camera mainly for its ground glass device affording a critical focus through the lens. It was equipped with a f 1.9, one-inch lens. With it, I used a standard microscope attachment which connects camera lens to microscope eye-piece through a series of prisms.

For illumination, two small spot-lights were used, each with 500 watt Mazda bulbs.

Smears containing the amoebae were put on slides, placed in the microscope. I put my camera in position, turned on my lights and prepared to get a focus. The amoebae were dead. Heat and intense light from the lamps killed them.

It should be explained that the light had to be focused on a mirror stationed below the slide. As it is reflected through the slide, up through the magnifying lenses of the microscope, through the prisms of the camera-microscope attachment and then to the film, much of it is absorbed, deflected and lost for photographic purposes. Hence, the need for excessive light on the mirror in order to get sufficient light to the film.

The problem, then, was to subtract the heat from the light. Tests with filters commonly used for this purpose revealed the amoebae still collapsing under the heat. And we wanted motion pictures of living specimens, not dead ones.

Following many experiments, we arrived close to the problem's answer. From a dealer in scientific items, we obtained a glass globe, or bottle. It was truly round and clear, being made of optical glass. This we filled with distilled water. Placing it between lamps and mirror, we found the softer, water-cooled light less annoying to the

Continued on page 533





Professional Lighting Units at Amateur Cost

by
Karl Hale

FOR NIGH on to twenty-eight years Jackson Rose, A S C has been delving and deploying into matters photographic During that portion of the day known commonly as "working hours" he is one of the front-rank Directors of Cinematography at Metro-Goldwyn-Mayer studios, and has been so engaged for these many years

After performing his daily stint in studio cinematographics, guess what he does when the whistle blows? He goes home and rounds out the day by puttering as an amateur with more items of light and lens

His camera provides career and hobby He delights in obtaining gorgeous and tremendous effects with his small Leica instrument His prints have been exhibited in nearly every photographic salon in the world In fact, he is one of America's foremost exhibitors, some 131 selected prints have been hung in 48 invitational showings within the last couple of years Jackson Rose is also the author of "Cinematographers' Handbook and Reference Guide"

His skill and artistry have brought to him inclusion in the select Who's Who in Pictorial Photography and in the American Annual of Photography

All of which is by way of evidencing that Jackson Rose is no rank beginner in this business of making pictures The amazing point of it all is that his amateur work is all done with the simplest of home made apparatus Here's a cinematographer who has at his command at the studio, a complete provision of the most modern and elaborate photographic facilities money can buy or science can fashion

But as an amateur, making still or motion pictures for his own entertainment, he spurns this elaborateness of equipment He works with the simplest tools imaginable, many of his own home-made design He is the personified rebuttal to the amateur whose plaint is, "Fine photography can't be had without a mess of costly equipment."

Take the subject of lights His are the essence of common sense, economy and efficiency He made them himself You can do the same For materials, visit a dealer in second-hand plumbing supplies and a dime store

The base of the light standard is an 8-inch pipe flange such as is used for bolting large pipes together It is reduced with a reducing nipple to take 1-inch pipe Into this is threaded a 2-foot length of 1-inch iron pipe, of the common water or gas variety An inch or so from the top is a thumb-screw extending through the pipe wall

Now comes a 2-foot length of ¾-inch pipe and a similar length of ½-inch pipe, each telescoping within the length below it and held in any desired position by the thumb-screw Total extension height is six feet Lowest position is a bit over two feet

At top of the ½-inch segment is an elbow nipple or two, each with its thumbscrew, permitting adjustment in any direction They support a wooden frame shaped as an L, reenforced with small angle irons In this frame is the reflector

The reflector is the easiest part of it At the dime store buy an aluminum dishpan about 10-inches wide and 4-inches deep In one side make a hole to take an ordinary lamp socket with pull-chain switch Run two-wire cable to the socket, with a plug at the other end

The cost, you ask? I'm almost ashamed to tell you It totals sixty-five cents complete!

The stand is purposely heavy, weighing ten pounds It won't topple over if you accidentally brush against it It stays where you put it and doesn't jiggle around

The aluminum dishpan-reflector casts a soft, warm light Light intensity is controlled by changing bulbs, using Photofload and Mazda bulbs of assorted sizes If diffusion is wanted, hang a piece of thin tissue paper or thin silk over the reflector

It's collapsible Fold it up and toss it in your car, if you wish If you're fussy, paint it with enamel of a desired color That may make the cost jump another ten cents Rose prefers his in the natural metal finish; it doesn't show marks from being banged about

Continued on page 534

This Matter of Balancing Light

by
Walter Blanchard

EVERY SO OFTEN, in professional discussions of lighting, the phrase "balancing light" crops up To the fellow who has never tried movie-making with artificial lights, the phrase sounds as if it must mean something as intricate as the tricks of a Japanese juggler Actually, it is just commonsense applied to lighting

A motion picture is simply a pattern of light and shade thrown on a flat, white screen The light and shade in the pattern reproduce what the camera saw when the picture was made If there's too much light in one place, and not enough in another, camera, film and projector will carry it through to the screen and an unsatisfactory picture "Balancing light" is simply a matter of preventing this—making the camera see a photographically pleasing picture

Suppose, for instance, we have a pretty girl sitting in a room, behind a window Through the window, we see the sunlit landscape Within the room is only the ordinary scattered light that comes through the other windows Now, check up on things with your exposure-meter Shooting through the window, the meter may indicate f 11 as the correct exposure Shooting at the girl, inside the room, you'll be lucky to get a reading of f 1 8 In other words, you have 38 times as much light in the background as you do in the foreground! No film ever made has enough latitude to give a pleasing picture of both elements at once. Either the distance through the window will be properly exposed, with the inside of the room just a black silhouette, or the room and the girl will be rightly exposed, and the view through the window will be a distracting white overexposure

Now, set up a couple of photofloods inside the room, illuminating the girl, and take another reading (Remember to re-set your meter for incandescent light!) In a close shot, you may get a reading around f 5 6 Now the difference in illumination is much smaller—the scene beyond the window reflects only four times as much light as the part of the scene in the room This is well within the latitude of the better types of substandard film, and though the background will still be slightly overexposed, the picture will be pretty satisfactory

If you like, you can add more light in the foreground, until both halves of the scene give the same reading, and the result on the screen is uniform In other words, you have balanced the lighting of the two parts of your scene

This is, of course, a rather elementary bit of balancing, and one not always encountered in ordinary home-filming The next thing is to apply the idea of balancing light to regular run-of-the-mill interiors

Well, let's take the same girl to another part of the room There isn't enough light to do much exposing with, whether it is daytime or night, so we'll have to shoot entirely by artificial light

In this case, the problem isn't merely one of getting enough light to make an exposure possible It is also a matter of arranging the light so that the camera will see a pleasing picture

If exposure were all we wanted, it would be a simple matter to set up one lamp as close to the center line of your camera's view as you could get it If that one weren't enough, you could set another beside it, just on the other side of the camera

But what sort of a picture would this give? A flat one Everything would be evenly illuminated, there would be practically no shadows On the screen, the only thing that indicates roundness and depth in a picture is the interplay of highlight and shadow, so if you kill the shadows, you kill the roundness and depth that make the picture seem natural.

Clearly, our lighting must not be balanced so as to cancel out all shadows, but so as to create them

There are a number of ways to do this Probably the simplest way is to put more light where we want highlights, leaving less light where we want shadows In this way, your shadows will be real shadows, not harsh, black patches Suppose we take one of our two lamps and move it closer to the girl As it is nearer, its rays are spread over a smaller area, and accordingly, they are stronger On the screen, the effect is much more natural, one side of the face is softly shadowed, the other slightly highlighted We begin to get an idea of natural modelling Of course, if the nearer light is too close or too strong it will flatten that side If it is too low, there will be no trace of shadow beneath that side of the jaw, and our pretty girl will seem a chinless wonder But if the two light-sources are reasonably well balanced, you'll get a good picture every time

If you want a rule for it, try to balance things so that the highlight side gets slightly less than twice as much light as the shadow side In some cases, with super-fast films, it may be safe to increase this slightly, because of the way the film reaches into the shadows Always expose for the shadow-side, the highlights will take care of themselves if the light is properly balanced

All of this is premised on close shots, but it works just as well for longer shots, too Only, you'll need more lamps, since your picture is covering a larger area, and the lamps must of necessity be farther from the subjects

For the more distant shots, it is a good idea to use several lamps especially to illuminate the people, and others especially to illuminate the background In this way, you can be sure of getting a good exposure throughout, rather than well-lit people moving against a shadowy, underexposed background

Of course there's no such thing as a real all-purpose lighting set-up But for long-shots, the nearest thing to such an ideal set-up is to put one unit fairly near the camera, for the shadow-side lighting of the people, and another much closer in, on the other side of the camera, for

Continued on page 534









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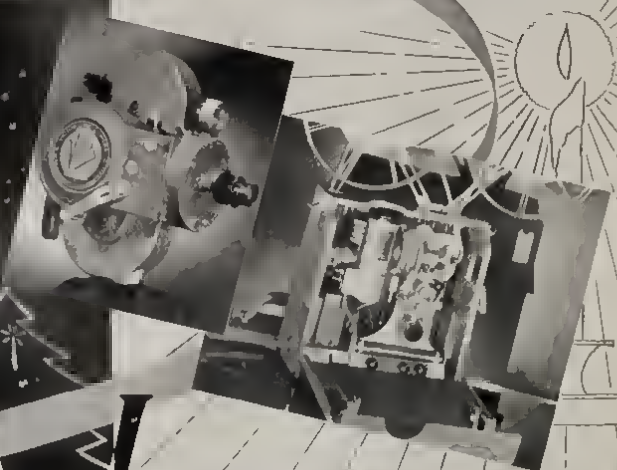
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Elmer Dyer, A.S.C.

Analyze Your Odd Shots for Continuity

by
Elmer Dyer, A.S.C.
Ace Air Cinematographer

SINCE RELEASING my picture, "Dare Devils of the Air," in 16mm for home use I have been asked by many amateurs whether I shot the picture especially for 16mm

During my many years of shooting professional air pictures I have accumulated a library of air scenes that is considered by many the most complete in Hollywood This library includes practically every thrill that has ever been conceived by daring pilots for motion pictures

I have in this library hundreds of shots of formations, "dog fights," crashes, ships out of control and everything in air stunts that makes the blood flow faster and the hair stand on ends

This was accumulated entirely for library use, but when the 16mm movie bug hit me I wanted some of this for home consumption to show my friends

Between pictures I decided to go over all of my air stuff and attempt a 16mm picture for release Things had to be tied together, then edited and properly titled

While the picture is complete in detail and flows swiftly, smoothly and excitingly, the thought struck me when doing it that many amateurs have material that would make fine pictures for them if they would look at it from a continuity stand-point

Perhaps my material was simple I was concentrating on air stuff This, however, points a lesson to first break your material down into some sort of classification If it is travel material, string it all together—that is those scenes that pertain to travel—project them and the chances are an idea will pop into your head for a title that will give it interest right off the bat I remember one amateur picture I saw that was a travel subject, but the idea was built around the automobile used It was a second hand affair and the amateur kidded the car throughout the picture, but bragged about the many interesting places "Pegasus" took him Even the name of the car gave the picture interest Sometimes the author would claim that "Pegasus didn't think so much of such and such a place so, of course we didn't stay long"

This business of making continuity of seemingly nothing is a matter of analysis Suppose you find yourself confronted with practically nothing but travel and scenic pictures In other words that is the only type you make Now break them down into other classifications and the chances are you will find a number of mighty fine subjects Undoubtedly many of them will contain water String all of them together and I bet you dollars to doughnuts that somewhere you will find a poem that would work out splendidly as your theme Poets like to write about water and photographers love to photograph water

Tennyson's Brook was done several years ago and entered in one of our annual contests Undoubtedly this man shot it as a continuity and did not string it together But we do believe that many amateurs have a Tennyson's brook among their pictures Look around for a poem on water you will find little difficulty in illustrating it

Supposing you have a lot of trees possibly the song "Only God Can Make a Tree" will supply you with the proper sub titles, [illegible] and if you use records for thematic music you have something made to order for an unusually interesting picture for anyone to see

Educating yourself to find continuity is just the same as educating yourself to find a good picture, to judge the right exposure and the other things that make photography interesting If, however you can develop a flair for continuity you are making definite headway in movies

Without continuity movies are merely a series of still pictures It is continuity or semblance of story that makes movies the interesting hobby they are It is the possibility

Continued on page 535

S-h-h! Cine-Cameras Turn to Detective Work

by
Grahame G. Graham

MOVE OVER, Mr Philo Vance, Mr Nero Wolfe, Mr Charles Chan—move over, I say, and make room for a new crime detector and justice purveyor, Mr Cine Camera

For this innocent appearing instrument, renowned as a household companion, a dispenser of entertainment and an aid to the scientist, is now revealed as a forceful agent in battling the subversive elements that filter into the best regulated communities

Picture for yourself a typical, dusty courtroom in New York The somnolent judge is hearing a girl's claim to a young fortune, a round $200,000 to be exact A bored and not too-comprehending jury is groggy under a barrage of expert and conflicting testimony

It appears the girl's career has been irreparably blasted A dancer, employed in a night club, with a movie contract just around the corner, has slipped and fallen while disembarking from an escalator in a prominent department store One leg, indispensable to her art, is so permanently crippled as result that she can scarcely walk, let alone dance

She is a wan and forlorn creature as she painfully hitches to the witness stand Medical authorities support the plaintiff's contention It seems the poor girl has a sure-fire case

The defense calmly introduces a surprise witness He is a motion picture cameraman, he states, and has recently been taking a few interesting shots of the plaintiff He specifies dates, times and places He presents a roll of 16mm film as evidence

In the darkened courtroom, a suddenly interested judge and jury lean forward eagerly under the invitation to "look at same moom pitchers" Across the portable screen flash images, readily recognized and identified as the plaintive plaintiff

She is shown on a Sunday morning skipping happily from her apartment building, in beach attire, and into a car af friends similarly dressed It shows her at a seaside resort indulging in the usual assortment of beach antics, running and splashing in the surf, playing with a beach ball, and even giving vent to ebullient holiday spirits with a couple of vivacious high kicks She is most evidently enjoying radiant health She most evidently is suffering from na impairment of leg use or control

Judge and jury believe what they see pictured The case is tossed aut the window A reputable business concern is saved from a sizable mulcting by an unscrupulous combination af shyster lawyer, doctor and plaintiff. A cine-camera gave more compelling evidence in fifteen minutes, evidence that could be understood and could nat be undermined by any cross-examination than did hours af verbal testimony

Use of films in court actians, criminal and civil, is growing rapidly When presented properly, most courts will accept them as exhibits and evidence Opposing attorneys find it difficult to object to their introduction without prejudicing their own case

In a few instances, these objections have been based on elaborate arguments that motian pictures are not necessarily true and faithful reproductions of a setting—and quote current studio productions as proof They endeavar ta discredit the offered films by references to trick shats, process phatagraphy, composite pictures and other camera expedients

But this contention quickly collapses when the principle af reversal film is explained The film to be shown is the actual original film that was in the camera, not a print nar a copy, a most vital legal point

One of the country's leading exponents of this modern brand of truth seeking in crime detection is William Sandel, of Glendale, California A private investigator of veteran experience, he turned to the cine-camera some years back in the endeavor to cut through the legal entanglements that surround most forms of procurable evidence He likes it for its utter truthfulness It condemns the guilty and exonerates the innocent with unfailing impartiality

There are, he reparts, two impartant factars to success in this wark. a great degree of personal patience and a camera with telephoto lens He uses a Bell & Howell turret type instrument fitted with a six-inch f4 5 lens It will image recognizable features 150 feet distant, his customary focal distance inasmuch as all shots are necessarily "grab" shots taken without the subject being aware of the photographing

To avoid courtroom controversy, his camera has but the ane speed of 16 frames per second Projection is at this normal speed and hence there can be na question raised as to the truthfulness of any action screened

He usually shoats fram his closed car as it pravides both the desired elements of rapid mobility and partial seclusion Many shats are taken through the glass windshield or side windows of the car Mainly he rests his camera on the steering wheel for rigid support Strangely enough, he finds his results only slightly affected by the intervening gloss Now and then, he will pick up a slight reflection depending on relatian of the car ta the sun's direction, but not often In short, shooting from inside the car is not a serious obstacle

Weather or light conditions can not be allowed to interfere with an assignment Unsavory characters perform on dull days as well as on bright Nor can he use a light meter on his subject because of distance And, more often than not, he is shooting from the cool shadow af his car with the subject exposed to hot sunshine As result, he has acquired uncanny ability in estimating light values existing at far points

This is of great importance After standing virgil for several days for a person ta appear in photographic range, the awaited appartunity must be filmed instantly There

Continued on page 534



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Let's Make Some Trick Titles

Continued from page 523

shot, have camera and tube pointing at a downward angle and hold a photo-flood unit close to the ground glass, while you revolve the tube. The more mirror-sides you have to your kaleidoscope-tube, the more tricky will be the reflections.

You can get some very interesting melting effects in Kodachrome titles by the use of colored candle-wax, or colored paraffin, molded into letters. Putting these into a flat pan (like a cookie-tin), which in turn is put on a gas stove or an electric heater, you mount the camera to shoot down onto the letters, and arrange the light so you get shadows to throw them into relief. As the paraffin gets hot, it melts—and so does your title. You can melt the words in or out, according to whether they are right-side-up or upside-down in relation to the camera.

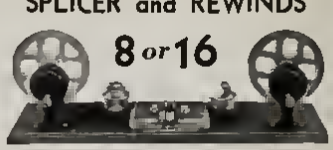
Now that Kodachrome is available for Leica and Contax, you can naturally use Kodachrome slides and a miniature slide-projector for making Kodachrome titles. Simply project the slide onto a sheet of ground-glass, and place your camera on the opposite side, to photograph the projected image from behind.

Carrying this idea one step farther, you can make titles using the beginning of your actual Kodachrome scene for a background. Instead of a Leica slide-projector, use your regular 16mm or 8mm projector. For your title-lettering, if you aren't a double-exposure enthusiast, you can use white or silver letters on a sheet of clear celluloid or cellophane placed a bit in front of the ground-glass projection screen. Arrange the front lighting so that no direct light hits the ground-glass screen. You can stop your camera's lens down pretty well, to increase the depth of focus, so that both letters and background are reasonably sharp. Now, indulge in some stop-motion work on both the camera and projector: expose a frame or two, stop the camera, move the projector ahead one frame, expose another frame in the camera, and so on. This would be rather tedious if you tried to expose a whole scene, but after you have shot enough footage so the title can be read, you can stop, and cut your title-film directly into the original film. It's a good idea to mark the lost frame you used in the projection-shot, to simplify the cutting and minimize the chance of a "jump" on the screen.

You can work all sorts of tricks into a title like this. For instance, you can fade the projected part in with a fading-glass, and then fade the lettering in and out by dimming the front lights.

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And by using o fading-glass on the camera, it should be possible to make Kodochrome lap-dissolves from one scene to another, from o title to a scene, and so on Even though you use the new Type A Kodochrome, you may find it necessary to experiment o bit with o graduoted blue filter until your color-balance in the copied film is correct, and the idea naturally won't work at all if your projector has o greenish gold-gloss fire-shutter But it offers a simple substitute for optical printing

Micro-Filming the Smallest Known Organism

Continued from page 524

amoebae But they still insisted on dying before we could get the camera started

Then we placed the water in a refrigerator and chilled it to just above the freezing point Camera was in place, focused, and started running Then the lights were turned on This procedure proved resultful I had about six feet of film showing the amoebae swimming around and indulging in their quaint custom of propagating by division Then they would succumb to the heat and light

That is, of the film that went through the camera, six feet of it was worth saving In running time, that represents ten seconds

By repeating the practice patiently and with great observance of detail, I finally secured sufficient of these ten-second strips of action to provide ample footage for the doctors' research

The microscope gave magnification of six hundred diameters Further magnification was gained by projection from the 16mm film to the screen Depending on distance from film to screen, this further magnification would be several hundred

Thus, a microscopic organism, invisible to the eye, was shown big as a watermelon for its most intimate idiosyncrasies to be noted in detail for the benefit of science and mankind

Later, symptomatic evidences of the two patients and other pathological data was filmed and added to the amoeba footage, providing a complete visual document of the effect and cause of this strange disease of unpronounceable title that for the first time invaded our shores

Exhibited before a meeting of the American College of Surgeons to an international audience, it evoked much favorable comment and was rated as a considerable contribution to the profession's sum total of reference material on the subject

Photographing a subject you can't see does have its fascinations

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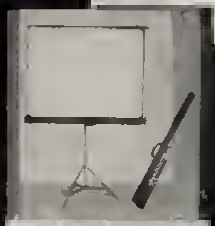




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Balancing Light

Continued from page 526

the highlight side, while for lighting the background, you might use one single unit for the shadow-side, and a twin-lamp unit for the high-light side. If your people are going to move around much, you will very likely need additional lamps to illuminate them; simply add them as needed (it's easy, now the Photoflood units are so much cheaper!) and remember to keep them properly balanced, so that all through the picture you have one side definitely highlight, the other definitely shadow.

Don't overlook, either, the possibilities offered in this balancing by the various sizes of Photofloods now available. In addition to the standard Photofloods, there are smaller, half-size globes, several sizes of opal-glass Photafloods which give a more diffused light, and the big No. 4 Photofloods which require a Mogul-base socket, and turn out more than three times as much light as the standard type.

Another thing don't overlook: the possibilities offered by the room itself. Regular and small-size Photofloods, judiciously placed in regular wall-fixtures, tables and reading lamps, and so on, will help to make the room look natural on the screen. And they will put in additional highlights and shadows that add to the illusion of depth and roundness.

Above all—don't be afraid of shadows! For without shadows, we can't perceive highlights. Shadows, quite as much as highlights, "make" the picture.

Your Yuletide Film

Continued from page 521

SCENE 32.—MEDIUM SHOT. The table guests raise their wine glasses.

SCENE 33.—CLOSE SHOT. Showing the glasses only, held aloft, a toast manifestly being given. FADE IN the superimposed title MERRY CHRISTMAS. FADE OUT slowly.

Street scenes and other exteriors should reflect the Holiday scene. If you can get out on a Sunday morning and manage to shoot the typical Christmas store window-displays, it will be a good item. A Pola-screen will cut the glare and reflection usually coming from large areas of glass. Community celebrations, outdoor illuminated trees, especially those encrusted with ice found in some sections, and other colorful Yule items can be added.

And for scenes of your children with Santa Claus, arrange with a nearby store using such a character for advertising to have the rotund and costumed personage give you a few minutes out in the sunlight during a time of day when visitors are few.

Professional Lighting Units at Amateur Cost

Continued from page 525

When cornered, Rose will break down and confess to having one item of lighting equipment that he rather shamedly admits is more expensive. It is a baby spot light. It, with its stand, cost three dollars and eighty-three cents!

The stand is the same as before, but with a U shaped wooden frame at the top. At a window-display concern, he purchased a second-hand window display spotlight such as window trimmers use. For it, he plunged—three dollars worth. It hangs in the U frame with thumbscrews enabling it to be fixed in any wanted direction.

It acts as a focusing control to throw a flood or spot light as desired. It is a decidedly useful unit for general or back lighting and for getting highlights in close-ups. The remaining eighteen cents of cost was, he agrees, rank extravagance. He saw a fancy switch at that price and fell for it.

For all practical photographic purposes, it is the lighting equivalent of a baby spot costing around fifty dollars.

He has several silver reflectors. They are of 3-ply 1-inch wood, four feet by two, hinged half way along the four-feet side, and covered with painter's silver leaf. They cast a very soft and even light that eyes can look straight at without blinking. Cost is but a few cents.

Rose made these handy tools not from a money-saving standpoint so much as he wanted them to certain design and couldn't find them at local stores to satisfy both his preference and purse.

He gladly offers them, and the accompanying illustration, as suggestion to other amateurs who can wield simple tools. Particularly in far-away points or in communities not boasting fully-stocked camera supply stores, should they be welcome. And by amateurs to whom prices of store equipment stand in the way of making interior shots.

Detective Work with Camera

Continued from page 530

is no time for considered or deliberate determination of exposure or focus. He grabs his camera, makes snap adjustments—and shoots. His photographic qualities average amazingly high, again showing that extensive puttering with camera adjustments is not a requirement to good work. It's a case of knowing your camera and of judging light.

Sandel never fails to get his man,

cinemoticolly speaking His most amusing experience wos filming o known criminol meeting severol of his cohorts in imagined privacy of his back yord Sandel filmed the group through a knothole in a fence.

The work hos few thrills It's mostly dagged perseverance But he looks forword to having o real thrill some day He would like to be on hond with his camero just as o bond of bank robbers came running from the hold-up scene, smoking guns in hond and loot in the other Such a film would be interesting evidence to show in court, he feels He can imagine the surprise of the robbers at being so completely identified as they gaze at the screen

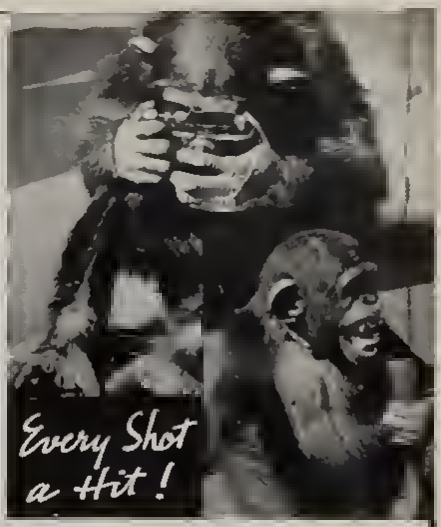
Analyze Your Odd Shots for Continuity

Continued from page 529

of continuity that made them commercially possible. Movies ond continuity ore practicolly synonymous . . one goes with the other

To make my picture "Dore Devils of the Air" I needed personalities, otherwise to merely state thot the daring pilot did so and so ond then show you the picture would not be so convincing os to soy Roscoe Turner performed the trick I selected such famous flyers os Michel Detroyat, Milo Bucham, world's champion upside down flier, the great German war ace, Major Ude, picking a hankerchief from the ground with the tip of his wing The fearless "Hollywood Trio" of motion picture stunt flyers, Captain Alex Papana of Roumania, the Itolion ace, Folconio and Dic Granere, Canadian world war ace

To create interesting movies you must have more than good photograph lighting and composition, you must also have continuity



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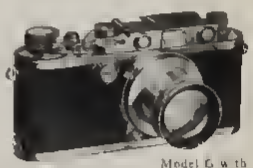
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CORRECTION!

In the November issue of the American Cinematographer an erroneous statement inadvertently appeared in the advertisement which announced the formation of Camera Equipment, Inc

The statement, "A staff of cameramen will shoot shorts of every type," should not have appeared Frank Zucker wishes to correct any false impression which may have resulted from this misleading phrase

Prize Winners

The prize winners of the American Cinematographer 1936 Amateur Movie contest will be announced in the January issue of this magazine . . that is the next issue

At the time of going to press everything points to an entry fully as big as last year Many of the old favorites are among those submitting film, but new names are coming into the picture—and several with some very fine film if preliminary judging is any indication

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1932—All months except October.

1931—All months.

1930—All months.

1929—All months.

1928—Jan., Feb., Morch, April, Moy, June, July, August, November, December.

1927—All months except October.

1926—All months.

1925—All months except November.

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1922—Jonuary, Februory, March, May, August, October, November, December.

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for the Amateur

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